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=> d his

     (FILE 'REGISTRY' ENTERED AT 14:14:26 ON 02 DEC 2004)
                DEL HIS Y
                ACT EPPS2/A
               ---------
L1              STR
L2   (       649)SEA FILE=REGISTRY SSS FUL L1
L3              STR
L4             8 SEA FILE=REGISTRY SUB=L2 SSS FUL L3
               ---------

     FILE 'CAPLUS' ENTERED AT 14:15:14 ON 02 DEC 2004
L5             8 S L4

     FILE 'USPATFULL' ENTERED AT 14:15:19 ON 02 DEC 2004
L6            16 S L4

     FILE 'CAPLUS, USPATFULL' ENTERED AT 14:15:41 ON 02 DEC 2004
L7            22 DUP REM L5 L6 (2 DUPLICATES REMOVED)
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=> fil reg
FILE 'REGISTRY' ENTERED AT 14:17:09 ON 02 DEC 2004
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:    1 DEC 2004  HIGHEST RN 791553-15-6
DICTIONARY FILE UPDATES:   1 DEC 2004  HIGHEST RN 791553-15-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html
```

covers claim 10-14

```
=> d que stat l4
L1                STR

H2N— C— C— C— N— G1— N— C— C— C— NH2
  1   2   3   4   5   6   7   8   9   10  11

REP G1=(1-4) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  11

STEREO ATTRIBUTES: NONE
L2  (       649)SEA FILE=REGISTRY SSS FUL L1
L3                STR

                  5       7
H2N— CH2-G2— CH2-N— G1— N— CH2-G2— CH2-NH2      CH— O
  1   2   3   4  +1   6  +1   8   9   10  11      @12 13

REP G1=(1-4) CH2
VAR G2=CH2/12
NODE ATTRIBUTES:
CHARGE  IS E+1    AT   5
CHARGE  IS E+1    AT   7
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  13
```

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STEREO ATTRIBUTES: NONE
L4             8 SEA FILE=REGISTRY SUB=L2 SSS FUL L3

100.0% PROCESSED    649 ITERATIONS                          8 ANSWERS
SEARCH TIME: 00.00.01


=> => fil caplus uspatfull
FILE 'CAPLUS' ENTERED AT 14:19:36 ON 02 DEC 2004
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FILE 'USPATFULL' ENTERED AT 14:19:36 ON 02 DEC 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

=> d que  nos l7
L1              STR
L2  (       649)SEA FILE=REGISTRY SSS FUL L1
L3              STR
L4            8 SEA FILE=REGISTRY SUB=L2 SSS FUL L3
L5            8 SEA FILE=CAPLUS ABB=ON  PLU=ON  L4
L6           16 SEA FILE=USPATFULL ABB=ON  PLU=ON  L4
L7           22 DUP REM L5 L6 (2 DUPLICATES REMOVED)


=> d ibib ab it l7 1-22

L7   ANSWER 1 OF 22  USPATFULL on STN
ACCESSION NUMBER:        2004:209031  USPATFULL
TITLE:                   Process of making a compound by forming a polymer from
                         a template drug
INVENTOR(S):             Trubetskoy, Vladimir, Middleton, WI, UNITED STATES
                         Wolff, Jon A., Madison, WI, UNITED STATES
                         Slattum, Paul M., Madison, WI, UNITED STATES
                         Hanson, Lisa, Madison, WI, UNITED STATES
                         Budker, Vladimir G., Middleton, WI, UNITED STATES
                         Hagstrom, James E., Middleton, WI, UNITED STATES

                              NUMBER        KIND    DATE
                         ---------------- ------ --------
PATENT INFORMATION:      US 2004161463      A1   20040819
APPLICATION INFO.:       US 2004-755785     A1   20040112  (10)
RELATED APPLN. INFO.:    Division of Ser. No. US 2001-993216, filed on 16 Nov
                         2001, GRANTED, Pat. No. US 6706922 Continuation-in-part
                         of Ser. No. US 1997-778657, filed on 3 Jan 1997,
                         GRANTED, Pat. No. US 6126964
DOCUMENT TYPE:           Utility
FILE SEGMENT:            APPLICATION
LEGAL REPRESENTATIVE:    Mark K. Johnson, Mirus Corporation, 505 S. Rosa Rd.,
                         Madison, WI, 53719
NUMBER OF CLAIMS:        11
EXEMPLARY CLAIM:         1
NUMBER OF DRAWINGS:      6 Drawing Page(s)
LINE COUNT:              1858
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      A method of forming polymers in the presence of nucleic acid using
        template polymerization. Also, a method of having the polymerization
        occur in heterophase systems. These methods can be used for the delivery
```

of nucleic acids, for condensing the nucleic acid, for forming nucleic acid binding polymers, for forming supramolecular complexes containing nucleic acid and polymer, and for forming an interpolyelectrolyte complex.

IT Histones
(H1, copolymer with dimethyldithiobispropionimidate; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Polyelectrolytes
(anionic; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Polyelectrolytes
(cationic; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Drugs

IT Transformation, genetic
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Histones

IT Peptides, biological studies

IT Polymers, biological studies

IT Protamines

IT Proteins, general, biological studies
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Nucleic acids
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Peptides, biological studies
(nuclear localization, copolymer with dithiobis[succinimidylpropionate]; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 9042-14-2, Dextran sulfate 54193-36-1, Polymethacrylic acid sodium salt
(caged DNA particles coated with; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 75-50-3, Trimethylamine, reactions 105-83-9, 3,3'-Diamino-N-methyldipropylamine 110-95-2 407-25-0, Trifluoroacetic anhydride 3030-47-5 5003-71-4, 3-Bromopropylamine hydrobromide 24424-99-5, Boc anhydride 58632-95-4, BOC-ON 174569-25-6 210292-17-4
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 814-68-6P, Acryloyl chloride 51834-66-3P 55362-80-6P, 9-Bromo-1-nonanol 109970-44-7P 136058-30-5P 210292-09-4P 210292-13-0P 210292-15-2P 210292-16-3P 210292-18-5P 210292-19-6P 210292-20-9P 210292-21-0P 210292-22-1P 210292-23-2P 210292-24-3P 210292-25-4P 210292-26-5P **210292-28-7P** 210292-30-1P
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 25104-18-1P, Polylysine 25232-42-2P, Polyvinylimidazole 38000-06-5P, Polylysine 141647-62-3DP, DPDPB, copolymer with T antigen peptide 210292-05-0P 210292-06-1P 210292-07-2P 210292-08-3P 210292-10-7P 210292-11-8P 210292-12-9P 210292-14-1P
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

L7 ANSWER 2 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2003:777246 CAPLUS
DOCUMENT NUMBER: 139:288636
TITLE: Single molecule detection systems and methods

INVENTOR(S): Williams, John G. K.; Bashford, Gregory R.
PATENT ASSIGNEE(S): Li-Cor, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 60 pp., Cont.-in-part of U.S. Ser. No. 876,375.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003186255	A1	20031002	US 2002-164685	20020605
US 2002039738	A1	20020404	US 2001-876375	20010606
WO 2002099406	A2	20021212	WO 2002-US18064	20020605
WO 2002099406	A3	20030206		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2001-876375	A2	20010606
US 2000-209896P	P	20000607
US 2001-286238P	P	20010424

AB A microfluidic system is provided that includes a substrate, a first microchannel disposed in the substrate for providing a reactant to a reaction zone, a second microchannel disposed in the substrate, and a third microchannel disposed in the substrate, the third microchannel providing fluid communication between the first and second microchannels. The system also typically includes first and second electrodes, positioned at opposite ends of the second microchannel, for providing an elec. field within the second microchannel. In operation, when the reactant is in the reaction zone, a reaction product is produced having a net elec. charge different from the elec. charge of the reactant.

IT Process control
(feedback; single mol. detection systems and methods)
IT Fluorescence microscopy
Lab-on-a-chip
Mathematical methods
Simulation and Modeling, physicochemical
Single molecule detection
(single mol. detection systems and methods)
IT Probes (nucleic acid)
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(single mol. detection systems and methods)
IT Glass, uses
RL: DEV (Device component use); USES (Uses)
(single mol. detection systems and methods)
IT Polysiloxanes, uses
RL: DEV (Device component use); USES (Uses)
(single mol. detection systems and methods)
IT 109-55-7 365-08-2, Thymidine triphosphate 628-21-7 24424-99-5
216659-47-1 380304-19-8 **380304-20-1** 380304-21-2
380304-22-3 380304-29-0 380368-23-0
RL: ARU (Analytical role, unclassified); ANST (Analytical study)

(single mol. detection systems and methods)
IT 9016-00-6, Di-Me siloxane, SRU 31900-57-9, Dimethylsilanediol homopolymer 60676-86-0, Fused silica
RL: DEV (Device component use); USES (Uses)
(single mol. detection systems and methods)

L7 ANSWER 3 OF 22 USPATFULL on STN

ACCESSION NUMBER:	2003:37197 USPATFULL
TITLE:	Compositions and methods for drug delivery using pH sensitive molecules
INVENTOR(S):	Trubetskoy, Vladimir S., Madison, WI, UNITED STATES Hagstrom, James E., Middleton, WI, UNITED STATES Budker, Vladimir G., Middleton, WI, UNITED STATES Wolff, Jon A., Madison, WI, UNITED STATES Rozema, David B., Madison, WI, UNITED STATES Monahan, Sean D., Madison, WI, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003026841	A1	20030206
APPLICATION INFO.:	US 2002-95680	A1	20020311 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2001-753990, filed on 2 Jan 2001, GRANTED, Pat. No. US 6383811		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-174132P	19991231 (60)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	Mark K. Johnson, P.O. Box 510644, New Berlin, WI, 53151
NUMBER OF CLAIMS:	15
EXEMPLARY CLAIM:	1
LINE COUNT:	3552

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An polyampholyte is utilized in a condensed polynucleotide complex for purposes of nucleic acid delivery to a cell. The complex can be formed with an appropriate amount of positive and/or negative charge such that the resulting complex can be delivered to the extravascular space and may be further delivered to a cell.

IT Histones
(H1, copolymer with dimethyldithiobispropionimidate; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT Polyelectrolytes
(anionic; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT Polyelectrolytes
(cationic; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT Drugs
IT Transformation, genetic
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT Histones
IT Peptides, biological studies
IT Polymers, biological studies
IT Protamines
IT Proteins, general, biological studies
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Nucleic acids
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT Peptides, biological studies
(nuclear localization, copolymer with dithiobis[succinimidylpropionate]; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT 9042-14-2, Dextran sulfate 54193-36-1, Polymethacrylic acid sodium salt
(caged DNA particles coated with; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT 75-50-3, Trimethylamine, reactions 105-83-9, 3,3'-Diamino-N-methyldipropylamine 110-95-2 407-25-0, Trifluoroacetic anhydride 3030-47-5 5003-71-4, 3-Bromopropylamine hydrobromide 24424-99-5, Boc anhydride 58632-95-4, BOC-ON 174569-25-6 210292-17-4
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT 814-68-6P, Acryloyl chloride 51834-66-3P 55362-80-6P, 9-Bromo-1-nonanol 109970-44-7P 136058-30-5P 210292-09-4P 210292-13-0P 210292-15-2P 210292-16-3P 210292-18-5P 210292-19-6P 210292-20-9P 210292-21-0P 210292-22-1P 210292-23-2P 210292-24-3P 210292-25-4P 210292-26-5P **210292-28-7P** 210292-30-1P
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT 25104-18-1P, Polylysine 25232-42-2P, Polyvinylimidazole 38000-06-5P, Polylysine 141647-62-3DP, DPDPB, copolymer with T antigen peptide 210292-05-0P 210292-06-1P 210292-07-2P 210292-08-3P 210292-10-7P 210292-11-8P 210292-12-9P 210292-14-1P
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

L7 ANSWER 4 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 2002:41634 CAPLUS
DOCUMENT NUMBER: 136:107515
TITLE: Polymer formation in presence of nucleic acid using template polymerization
INVENTOR(S): Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.; Trubetskoy, Vladimir S.; Slattum, Paul M.; Hanson, Lisa J.
PATENT ASSIGNEE(S): Mirus Corp., USA
SOURCE: U.S., 26 pp., Cont.-in-part of U.S. Ser. No. 778,657.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6339067	B1	20020115	US 1997-692	19971230
US 6126964	A	20001003	US 1997-778657	19970103
US 2001024829	A1	20010927	US 2001-753990	20010102
US 6383811	B2	20020507		
US 2002165184	A1	20021107	US 2001-993216	20011116
US 6706922	B2	20040316		
US 2002061287	A1	20020523	US 2001-4763	20011205
US 2002085989	A1	20020704	US 2001-5294	20011205
US 2004161463	A1	20040819	US 2004-755785	20040112
PRIORITY APPLN. INFO.:			US 1997-778657	A2 19970103
			US 1996-9593P	P 19960104

US 1997-692 A2 19971230
US 1999-464871 A3 19991216
US 1999-174132P P 19991231
US 2001-993216 A3 20011116

AB Polymers are formed in the presence of nucleic acid using template polymerization
Also, polymerization occur in heterophase systems. These methods can be used for
the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid binding polymers, for forming supramol. complexes containing nucleic acid and polymer, and for forming an interpolyelectrolyte complex. For example, step polymerization with DNA as a template was performed using N,N'-bis(2-aminoethyl)-1,3-propanediamine and dithiobis(succinimidylpropionate). It was possible to obtain DNA-bound polyamide as a result of the polymerization and the resulting polymer can condense template DNA into compact structures.

IT Ligands
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cell-binding; polymer formation in presence of nucleic acid using template polymerization)

IT DNA
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(complexes, with polymers; polymer formation in presence of nucleic acid using template polymerization)

IT Genetic vectors
Polyelectrolytes
Transformation, genetic
(polymer formation in presence of nucleic acid using template polymerization)

IT DNA
Nucleic acids
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(polymer formation in presence of nucleic acid using template polymerization)

IT Polymers, biological studies
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polymer formation in presence of nucleic acid using template polymerization)

IT Stabilizing agents
(steric; polymer formation in presence of nucleic acid using template polymerization)

IT Polymerization
(template; polymer formation in presence of nucleic acid using template polymerization)

IT 7647-14-5, Sodium chloride, uses 59012-54-3, Dimethyl 3,3'-Dithiobispropionimidate
RL: MOA (Modifier or additive use); USES (Uses)
(polymer formation in presence of nucleic acid using template polymerization)

IT 9042-14-2, Dextran sulfate
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polymer formation in presence of nucleic acid using template polymerization)

IT 389132-33-6P

RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polymer formation in presence of nucleic acid using template polymerization)

IT 25988-63-0, Poly-L-lysine hydrobromide 26588-20-5 71550-12-4, Polyallylamine hydrochloride
RL: POF (Polymer in formulation); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(polymer formation in presence of nucleic acid using template polymerization)

IT 75-50-3, Trimethylamine, reactions 105-83-9, 3,3'-Diamino-N-methyldipropylamine 110-95-2 115-70-8, AEPD 407-25-0, Trifluoroacetic anhydride 814-68-6, Acryloyl chloride 3030-47-5 5003-71-4, 3-Bromopropylamine hydrobromide 24424-99-5, tert-Butoxycarbonyl anhydride 55362-80-6, 9-Bromo-1-nonanol 174569-25-6 210292-17-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(polymer formation in presence of nucleic acid using template polymerization)

IT 51834-66-3P 109970-44-7P 136058-30-5P 210292-13-0P 210292-15-2P 210292-16-3P 210292-18-5P 210292-19-6P 210292-21-0P 210292-22-1P 210292-23-2P 210292-24-3P 210292-25-4P 210292-26-5P **210292-28-7P** 210292-30-1P 389132-27-8P 389132-28-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(polymer formation in presence of nucleic acid using template polymerization)

IT 25232-42-2P, Poly(1-vinylimidazole) 57757-57-0DP, crosslinked with NLS peptide and DPDPB 141647-62-3DP, DPDPB, crosslinked with NLS peptide and DSP 210292-07-2P 248915-94-8P 248915-97-1P 248915-98-2P 389132-29-0P 389132-30-3P 389132-31-4P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polymer formation in presence of nucleic acid using template polymerization)

IT 249299-75-0
RL: PRP (Properties)
(unclaimed sequence; polymer formation in presence of nucleic acid using template polymerization)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 22 USPATFULL on STN

ACCESSION NUMBER:	2002:301135 USPATFULL
TITLE:	Flowcell system for nucleic acid sequencing
INVENTOR(S):	Williams, John G.K., Lincoln, NE, UNITED STATES Bashford, Gregory R., Lincoln, NE, UNITED STATES
PATENT ASSIGNEE(S):	Li-cor, Inc., Lincoln, NE (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002168678	A1	20021114
APPLICATION INFO.:	US 2002-146400	A1	20020514 (10)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 2001-876375, filed on 6 Jun 2001, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-209896P	20000607 (60)

US 2001-286238P 20010424 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
NUMBER OF CLAIMS: 54
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 18 Drawing Page(s)
LINE COUNT: 2248
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides compounds, methods and systems for sequencing nucleic acid using single molecule detection. Using labeled NPs that exhibit charge-switching behavior, single-molecule DNA sequencing in a microchannel sorting system is realized. In operation, sequencing products are detected enabling real-time sequencing as successive detectable moieties flow through a detection channel. By electrically sorting charged molecules, the cleaved product molecules are detected in isolation without interference from unincorporated NPs and without illuminating the polymerase-DNA complex.

IT Electric field
(charge-switch nucleotide cleavage products separation by; charge-switch nucleotides for use in nucleic acid sequencing)
IT DNA sequence analysis
(charge-switch nucleotides for use in nucleic acid sequencing)
IT Nucleic acids
(charge-switch nucleotides for use in nucleic acid sequencing)
IT Primers (nucleic acid)
(charge-switch nucleotides for use in nucleic acid sequencing)
IT Cyanine dyes
IT Fluorescent substances
(conjugates with NTPs/dNTPs; charge-switch nucleotides for use in nucleic acid sequencing)
IT Deoxyribonucleoside triphosphates
IT Nucleoside triphosphates
IT Nucleotides, preparation
(conjugates with fluorophores; charge-switch nucleotides for use in nucleic acid sequencing)
IT 9012-90-2, DNA polymerase 9013-05-2, Phosphatase 9014-24-8, DNA-dependent RNA polymerase 9025-82-5, Phosphodiesterase 9068-38-6, Reverse transcriptase 380304-23-4 380304-24-5 380304-25-6 380304-26-7 380304-27-8 380304-28-9 380304-29-0 380304-30-3 380304-31-4 380304-32-5 380304-33-6 380368-23-0
(charge-switch nucleotides for use in nucleic acid sequencing)
IT 88-68-6DP, Anthranilamide, conjugates with NTPs/dNTPs 91-64-5DP, Coumarin, conjugates with NTPs/dNTPs 365-08-2DP, TTP, conjugates with fluorophores 1173-82-6DP, DUTP, conjugates with fluorophores 1927-31-7DP, DATP, conjugates with fluorophores 2056-98-6DP, DCTP, conjugates with fluorophores 2321-07-5DP, Fluorescein, conjugates with NTPs/dNTPs 2564-35-4DP, DGTP, conjugates with fluorophores 7440-27-9DP, Terbium, chelates, conjugates with NTPs/dNTPs 13558-31-1DP, conjugates with NTPs/dNTPs 17681-50-4DP, Reactive Red 4, conjugates with NTPs/dNTPs 50402-56-7DP, EDANS, conjugates with NTPs/dNTPs 76823-03-5DP, 5-Carboxyfluorescein, conjugates with NTPs/dNTPs 138026-71-8DP, BODIPY, conjugates with NTPs/dNTPs 204934-16-7DP, BODIPY TR, conjugates with NTPs/dNTPs
(charge-switch nucleotides for use in nucleic acid sequencing)
IT 365-08-2, TTP 628-21-7, 1,4-Diiodobutane 926-63-6, N,N-Dimethylpropylamine 24424-99-5 380304-22-3
(charge-switch nucleotides for use in nucleic acid sequencing)
IT 216659-47-1P 380304-19-8P **380304-20-1P** 380304-21-2P

(charge-switch nucleotides for use in nucleic acid sequencing)

L7 ANSWER 6 OF 22 USPATFULL on STN

ACCESSION NUMBER:	2002:295138 USPATFULL			
TITLE:	Process of making a compound by forming a polymer from a template drug			
INVENTOR(S):	Wolff, Jon A., Madison, WI, UNITED STATES Hagstrom, James E., Madison, WI, UNITED STATES Budker, Vladimir G., Madison, WI, UNITED STATES Trubetskoy, Vladimir S., Madison, WI, UNITED STATES Slattum, Paul M., Madison, WI, UNITED STATES Hanson, Lisa J., Madison, WI, UNITED STATES			
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002165184	A1	20021107	
	US 6706922	B2	20040316	
APPLICATION INFO.:	US 2001-993216	A1	20011116	(9)
RELATED APPLN. INFO.:	Division of Ser. No. US 1997-692, filed on 30 Dec 1997, GRANTED, Pat. No. US 6339067 Continuation-in-part of Ser. No. US 1997-778657, filed on 3 Jan 1997, GRANTED, Pat. No. US 6126964			
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	APPLICATION			
LEGAL REPRESENTATIVE:	Mark K. Johnson, PO BOx 510644, New Berlin, WI, 53151-0644			
NUMBER OF CLAIMS:	27			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	6 Drawing Page(s)			
LINE COUNT:	1909			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of forming polymers in the presence of nucleic acid using template polymerization. Also, a method of having the polymerization occur in heterophase systems. These methods can be used for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid binding polymers, for forming supramolecular complexes containing nucleic acid and polymer, and for forming an interpolyelectrolyte complex.

IT Histones
(H1, copolymer with dimethyldithiobispropionimidate; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Polyelectrolytes
(anionic; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Polyelectrolytes
(cationic; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Drugs

IT Transformation, genetic
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Histones

IT Peptides, biological studies

IT Polymers, biological studies

IT Protamines

IT Proteins, general, biological studies
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Nucleic acids

(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Peptides, biological studies
(nuclear localization, copolymer with dithiobis[succinimidylpropionate]; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 9042-14-2, Dextran sulfate 54193-36-1, Polymethacrylic acid sodium salt
(caged DNA particles coated with; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 75-50-3, Trimethylamine, reactions 105-83-9, 3,3'-Diamino-N-methyldipropylamine 110-95-2 407-25-0, Trifluoroacetic anhydride 3030-47-5 5003-71-4, 3-Bromopropylamine hydrobromide 24424-99-5, Boc anhydride 58632-95-4, BOC-ON 174569-25-6 210292-17-4
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 814-68-6P, Acryloyl chloride 51834-66-3P 55362-80-6P, 9-Bromo-1-nonanol 109970-44-7P 136058-30-5P 210292-09-4P 210292-13-0P 210292-15-2P 210292-16-3P 210292-18-5P 210292-19-6P 210292-20-9P 210292-21-0P 210292-22-1P 210292-23-2P 210292-24-3P 210292-25-4P 210292-26-5P **210292-28-7P** 210292-30-1P
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 25104-18-1P, Polylysine 25232-42-2P, Polyvinylimidazole 38000-06-5P, Polylysine 141647-62-3DP, DPDPB, copolymer with T antigen peptide 210292-05-0P 210292-06-1P 210292-07-2P 210292-08-3P 210292-10-7P 210292-11-8P 210292-12-9P 210292-14-1P
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

L7 ANSWER 7 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2002:294277 USPATFULL
TITLE: Polyampholytes for delivering polyions to a cell
INVENTOR(S): Wolff, Jon A., Madison, WI, UNITED STATES
Hagstrom, James E., Middleton, WI, UNITED STATES
Budker, Vladimir G., Middleton, WI, UNITED STATES
Trubetskoy, Vladimir S., Madison, WI, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002164315	A1	20021107
	US 6794189	B2	20040921
APPLICATION INFO.:	US 2002-95682	A1	20020510 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 2001-753990, filed on 2 Jan 2001, GRANTED, Pat. No. US 6383811

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-174132P	19991231 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Mark K. Johnson, P.O. Box 510644, New Berlin, WI, 53151
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 863
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An polyampholyte is utilized in a condensed polynucleotide complex for purposes of nucleic acid delivery to a cell. The complex can be formed with an appropriate amount of positive and/or negative charge such that

the resulting complex can be delivered to the extravascular space and may be further delivered to a cell.

IT Histones
(H1, copolymer with dimethyldithiobispropionimidate; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Polyelectrolytes
(anionic; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Polyelectrolytes
(cationic; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Drugs

IT Transformation, genetic
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Histones

IT Peptides, biological studies

IT Polymers, biological studies

IT Protamines

IT Proteins, general, biological studies
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Nucleic acids
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Peptides, biological studies
(nuclear localization, copolymer with dithiobis[succinimidylpropionate]; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 9042-14-2, Dextran sulfate 54193-36-1, Polymethacrylic acid sodium salt
(caged DNA particles coated with; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 75-50-3, Trimethylamine, reactions 105-83-9, 3,3'-Diamino-N-methyldipropylamine 110-95-2 407-25-0, Trifluoroacetic anhydride 3030-47-5 5003-71-4, 3-Bromopropylamine hydrobromide 24424-99-5, Boc anhydride 58632-95-4, BOC-ON 174569-25-6 210292-17-4
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 814-68-6P, Acryloyl chloride 51834-66-3P 55362-80-6P, 9-Bromo-1-nonanol 109970-44-7P 136058-30-5P 210292-09-4P 210292-13-0P 210292-15-2P 210292-16-3P 210292-18-5P 210292-19-6P 210292-20-9P 210292-21-0P 210292-22-1P 210292-23-2P 210292-24-3P 210292-25-4P 210292-26-5P **210292-28-7P** 210292-30-1P
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 25104-18-1P, Polylysine 25232-42-2P, Polyvinylimidazole 38000-06-5P, Polylysine 141647-62-3DP, DPDPB, copolymer with T antigen peptide 210292-05-0P 210292-06-1P 210292-07-2P 210292-08-3P 210292-10-7P 210292-11-8P 210292-12-9P 210292-14-1P
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

L7 ANSWER 8 OF 22 USPATFULL on STN
ACCESSION NUMBER: 2002:164376 USPATFULL
TITLE: Process of making a compound by forming a polymer from a template drug
INVENTOR(S): Wolff, Jon A., Madison, WI, UNITED STATES
Hagstrom, James E., Madison, WI, UNITED STATES

Budker, Vladimir G., Madison, WI, UNITED STATES
Trubetskoy, Vladimir S., Madison, WI, UNITED STATES
Slattum, Paul M., Madison, WI, UNITED STATES
Hanson, Lisa J., Madison, WI, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002085989	A1	20020704
APPLICATION INFO.:	US 2001-5294	A1	20011205 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 1999-464871, filed on 16 Dec 1999, PENDING Division of Ser. No. US 1997-778657, filed on 3 Jan 1997, PATENTED

	NUMBER	DATE
PRIORITY INFORMATION:	US 1996-9593P	19960104 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Mark K. Johnson, PO Box 510644, New Berlin, WI, 53151-0644
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 1346
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of forming polymers in the presence of nucleic acid using template polymerization. Also, a method of having the polymerization occur in heterophase systems. These methods can be used for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid binding polymers, for forming supramolecular complexes containing nucleic acid and polymer, and for forming an interpolyelectrolyte complex.

IT Histones
(H1, copolymer with dimethyldithiobispropionimidate; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT Polyelectrolytes
(anionic; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT Polyelectrolytes
(cationic; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT Drugs
IT Transformation, genetic
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT Histones
IT Peptides, biological studies
IT Polymers, biological studies
IT Protamines
IT Proteins, general, biological studies
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT Nucleic acids
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT Peptides, biological studies
(nuclear localization, copolymer with dithiobis[succinimidylpropionate]; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 9042-14-2, Dextran sulfate 54193-36-1, Polymethacrylic acid sodium salt
(caged DNA particles coated with; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT 75-50-3, Trimethylamine, reactions 105-83-9, 3,3'-Diamino-N-methyldipropylamine 110-95-2 407-25-0, Trifluoroacetic anhydride 3030-47-5 5003-71-4, 3-Bromopropylamine hydrobromide 24424-99-5, Boc anhydride 58632-95-4, BOC-ON 174569-25-6 210292-17-4
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT 814-68-6P, Acryloyl chloride 51834-66-3P 55362-80-6P, 9-Bromo-1-nonanol 109970-44-7P 136058-30-5P 210292-09-4P 210292-13-0P 210292-15-2P 210292-16-3P 210292-18-5P 210292-19-6P 210292-20-9P 210292-21-0P 210292-22-1P 210292-23-2P 210292-24-3P 210292-25-4P 210292-26-5P **210292-28-7P** 210292-30-1P
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)
IT 25104-18-1P, Polylysine 25232-42-2P, Polyvinylimidazole 38000-06-5P, Polylysine 141647-62-3DP, DPDPB, copolymer with T antigen peptide 210292-05-0P 210292-06-1P 210292-07-2P 210292-08-3P 210292-10-7P 210292-11-8P 210292-12-9P 210292-14-1P
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

L7 ANSWER 9 OF 22 USPATFULL on STN
ACCESSION NUMBER: 2002:119307 USPATFULL
TITLE: Process of making a compound by forming a polymer from a template drug
INVENTOR(S): Wolff, Jon A., Madison, WI, UNITED STATES
Hagstrom, James E., Madison, WI, UNITED STATES
Budker, Vladimir G., Madison, WI, UNITED STATES
Trubetskoy, Vladimir S., Madison, WI, UNITED STATES
Slattum, Paul M., Madison, WI, UNITED STATES
Hanson, Lisa J., Madison, WI, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002061287	A1	20020523
APPLICATION INFO.:	US 2001-4763	A1	20011205 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 1999-464871, filed on 16 Dec 1999, PENDING Division of Ser. No. US 1997-778657, filed on 3 Jan 1997, PATENTED

	NUMBER	DATE
PRIORITY INFORMATION:	US 1996-9593P	19960104 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Mark K. Johnson, PO Box 510644, New Berlin, WI, 53151-0644
NUMBER OF CLAIMS: 12
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 1358
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method of forming polymers in the presence of nucleic acid using template polymerization. Also, a method of having the polymerization occur in heterophase systems. These methods can be used for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid binding polymers, for forming supramolecular complexes containing

nucleic acid and polymer, and for forming an interpolyelectrolyte complex.

IT Histones
(H1, copolymer with dimethyldithiobispropionimidate; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Polyelectrolytes
(anionic; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Polyelectrolytes
(cationic; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Drugs

IT Transformation, genetic
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Histones

IT Peptides, biological studies

IT Polymers, biological studies

IT Protamines

IT Proteins, general, biological studies
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Nucleic acids
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Peptides, biological studies
(nuclear localization, copolymer with dithiobis[succinimidylpropionate]; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 9042-14-2, Dextran sulfate 54193-36-1, Polymethacrylic acid sodium salt
(caged DNA particles coated with; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 75-50-3, Trimethylamine, reactions 105-83-9, 3,3'-Diamino-N-methyldipropylamine 110-95-2 407-25-0, Trifluoroacetic anhydride 3030-47-5 5003-71-4, 3-Bromopropylamine hydrobromide 24424-99-5, Boc anhydride 58632-95-4, BOC-ON 174569-25-6 210292-17-4
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 814-68-6P, Acryloyl chloride 51834-66-3P 55362-80-6P, 9-Bromo-1-nonanol 109970-44-7P 136058-30-5P 210292-09-4P 210292-13-0P 210292-15-2P 210292-16-3P 210292-18-5P 210292-19-6P 210292-20-9P 210292-21-0P 210292-22-1P 210292-23-2P 210292-24-3P 210292-25-4P 210292-26-5P **210292-28-7P** 210292-30-1P
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 25104-18-1P, Polylysine 25232-42-2P, Polyvinylimidazole 38000-06-5P, Polylysine 141647-62-3DP, DPDPB, copolymer with T antigen peptide 210292-05-0P 210292-06-1P 210292-07-2P 210292-08-3P 210292-10-7P 210292-11-8P 210292-12-9P 210292-14-1P
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

L7 ANSWER 10 OF 22 USPATFULL on STN
ACCESSION NUMBER: 2002:78417 USPATFULL
TITLE: Charge-switch nucleotides
INVENTOR(S): Williams, John G.K., Lincoln, NE, UNITED STATES
Bashford, Gregory R., Lincoln, NE, UNITED STATES
Chen, Jiyan, Lincoln, NE, UNITED STATES

Draney, Dan, Lincoln, NE, UNITED STATES
Narayanan, Nara, Greensboro, NC, UNITED STATES
Reynolds, Bambi L., Lincoln, NE, UNITED STATES
Sheaff, Pamela, Omaha, NE, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002042071	A1	20020411
APPLICATION INFO.:	US 2001-876374	A1	20010606 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-209896P	20000607 (60)
	US 2001-286238P	20010424 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
NUMBER OF CLAIMS: 48
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 18 Drawing Page(s)
LINE COUNT: 2250
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides compounds, methods and systems for sequencing nucleic acid using single molecule detection. Using labeled NPs that exhibit charge-switching behavior, single-molecule DNA sequencing in a microchannel sorting system is realized. In operation, sequencing products are detected enabling real-time sequencing as successive detectable moieties flow through a detection channel. By electrically sorting charged molecules, the cleaved product molecules are detected in isolation without interference from unincorporated NPs and without illuminating the polymerase-DNA complex.

IT Electric field
(charge-switch nucleotide cleavage products separation by; charge-switch nucleotides for use in nucleic acid sequencing)
IT DNA sequence analysis
(charge-switch nucleotides for use in nucleic acid sequencing)
IT Nucleic acids
(charge-switch nucleotides for use in nucleic acid sequencing)
IT Primers (nucleic acid)
(charge-switch nucleotides for use in nucleic acid sequencing)
IT Cyanine dyes
IT Fluorescent substances
(conjugates with NTPs/dNTPs; charge-switch nucleotides for use in nucleic acid sequencing)
IT Deoxyribonucleoside triphosphates
IT Nucleoside triphosphates
IT Nucleotides, preparation
(conjugates with fluorophores; charge-switch nucleotides for use in nucleic acid sequencing)
IT 9012-90-2, DNA polymerase 9013-05-2, Phosphatase 9014-24-8, DNA-dependent RNA polymerase 9025-82-5, Phosphodiesterase 9068-38-6, Reverse transcriptase 380304-23-4 380304-24-5 380304-25-6 380304-26-7 380304-27-8 380304-28-9 380304-29-0 380304-30-3 380304-31-4 380304-32-5 380304-33-6 380368-23-0
(charge-switch nucleotides for use in nucleic acid sequencing)
IT 88-68-6DP, Anthranilamide, conjugates with NTPs/dNTPs 91-64-5DP, Coumarin, conjugates with NTPs/dNTPs 365-08-2DP, TTP, conjugates with fluorophores 1173-82-6DP, DUTP, conjugates with fluorophores 1927-31-7DP, DATP, conjugates with fluorophores 2056-98-6DP, DCTP,

conjugates with fluorophores 2321-07-5DP, Fluorescein, conjugates with NTPs/dNTPs 2564-35-4DP, DGTP, conjugates with fluorophores 7440-27-9DP, Terbium, chelates, conjugates with NTPs/dNTPs 13558-31-1DP, conjugates with NTPs/dNTPs 17681-50-4DP, Reactive Red 4, conjugates with NTPs/dNTPs 50402-56-7DP, EDANS, conjugates with NTPs/dNTPs 76823-03-5DP, 5-Carboxyfluorescein, conjugates with NTPs/dNTPs 138026-71-8DP, BODIPY, conjugates with NTPs/dNTPs 204934-16-7DP, BODIPY TR, conjugates with NTPs/dNTPs
(charge-switch nucleotides for use in nucleic acid sequencing)

IT 365-08-2, TTP 628-21-7, 1,4-Diiodobutane 926-63-6, N,N-Dimethylpropylamine 24424-99-5 380304-22-3
(charge-switch nucleotides for use in nucleic acid sequencing)

IT 216659-47-1P 380304-19-8P **380304-20-1P** 380304-21-2P
(charge-switch nucleotides for use in nucleic acid sequencing)

L7 ANSWER 11 OF 22 USPATFULL on STN

ACCESSION NUMBER: 2002:72601 USPATFULL

TITLE: Nucleic acid sequencing using charge-switch nucleotides

INVENTOR(S): Williams, John G.K., Lincoln, NE, UNITED STATES
Bashford, Gregory R., Lincoln, NE, UNITED STATES

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002039738	A1	20020404	
APPLICATION INFO.:	US 2001-876375	A1	20010606	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-209896P	20000607 (60)
	US 2001-286238P	20010424 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834

NUMBER OF CLAIMS: 54

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 18 Drawing Page(s)

LINE COUNT: 2167

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides compounds, methods and systems for sequencing nucleic acid using single molecule detection. Using labeled NPs that exhibit charge-switching behavior, single-molecule DNA sequencing in a microchannel sorting system is realized. In operation, sequencing products are detected enabling real-time sequencing as successive detectable moieties flow through a detection channel. By electrically sorting charged molecules, the cleaved product molecules are detected in isolation without interference from unincorporated NPs and without illuminating the polymerase-DNA complex.

IT Electric field
(charge-switch nucleotide cleavage products separation by; charge-switch nucleotides for use in nucleic acid sequencing)

IT DNA sequence analysis
(charge-switch nucleotides for use in nucleic acid sequencing)

IT Nucleic acids
(charge-switch nucleotides for use in nucleic acid sequencing)

IT Primers (nucleic acid)
(charge-switch nucleotides for use in nucleic acid sequencing)

IT Cyanine dyes

IT Fluorescent substances
(conjugates with NTPs/dNTPs; charge-switch nucleotides for use in

nucleic acid sequencing)
IT Deoxyribonucleoside triphosphates
IT Nucleoside triphosphates
IT Nucleotides, preparation
(conjugates with fluorophores; charge-switch nucleotides for use in nucleic acid sequencing)
IT 9012-90-2, DNA polymerase 9013-05-2, Phosphatase 9014-24-8, DNA-dependent RNA polymerase 9025-82-5, Phosphodiesterase 9068-38-6, Reverse transcriptase 380304-23-4 380304-24-5 380304-25-6 380304-26-7 380304-27-8 380304-28-9 380304-29-0 380304-30-3 380304-31-4 380304-32-5 380304-33-6 380368-23-0
(charge-switch nucleotides for use in nucleic acid sequencing)
IT 88-68-6DP, Anthranilamide, conjugates with NTPs/dNTPs 91-64-5DP, Coumarin, conjugates with NTPs/dNTPs 365-08-2DP, TTP, conjugates with fluorophores 1173-82-6DP, DUTP, conjugates with fluorophores 1927-31-7DP, DATP, conjugates with fluorophores 2056-98-6DP, DCTP, conjugates with fluorophores 2321-07-5DP, Fluorescein, conjugates with NTPs/dNTPs 2564-35-4DP, DGTP, conjugates with fluorophores 7440-27-9DP, Terbium, chelates, conjugates with NTPs/dNTPs 13558-31-1DP, conjugates with NTPs/dNTPs 17681-50-4DP, Reactive Red 4, conjugates with NTPs/dNTPs 50402-56-7DP, EDANS, conjugates with NTPs/dNTPs 76823-03-5DP, 5-Carboxyfluorescein, conjugates with NTPs/dNTPs 138026-71-8DP, BODIPY, conjugates with NTPs/dNTPs 204934-16-7DP, BODIPY TR, conjugates with NTPs/dNTPs
(charge-switch nucleotides for use in nucleic acid sequencing)
IT 365-08-2, TTP 628-21-7, 1,4-Diiodobutane 926-63-6, N,N-Dimethylpropylamine 24424-99-5 380304-22-3
(charge-switch nucleotides for use in nucleic acid sequencing)
IT 216659-47-1P 380304-19-8P **380304-20-1P** 380304-21-2P
(charge-switch nucleotides for use in nucleic acid sequencing)

L7 ANSWER 12 OF 22 USPATFULL on STN

ACCESSION NUMBER:	2002:34557 USPATFULL			
TITLE:	Cyanine dyes			
INVENTOR(S):	Cummins, William, Tring, UNITED KINGDOM West, Richard, Uxbridge, UNITED KINGDOM Smith, John Anthony, Rhiwbina, UNITED KINGDOM			
PATENT ASSIGNEE(S):	Nycomed Amersham plc, Buckinghamshire, UNITED KINGDOM (non-U.S. corporation)			
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6348599	B1	20020219	
	WO 9905221		19990204	
APPLICATION INFO.:	US 2000-463534		20000424	(9)
	WO 1998-GB2232		19980727	
			20000424	PCT 371 date
	NUMBER		DATE	
PRIORITY INFORMATION:	GB 1997-305550		19970728	
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	GRANTED			
PRIMARY EXAMINER:	Higel, Floyd D.			
LEGAL REPRESENTATIVE:	Ronning, Jr., Royal N.			
NUMBER OF CLAIMS:	10			
EXEMPLARY CLAIM:	1			
NUMBER OF DRAWINGS:	0 Drawing Figure(s); 0 Drawing Page(s)			
LINE COUNT:	618			

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A cyanine dye having the structure ##STR1##

has an overall positive charge greater than +1, by virtue of the presence of one to five positively charged N or P or S atoms, and also has a reactive or functional group by which it may be linked to a biomolecule or a solid surface.

IT Functional groups
(aminoxy; fluorescent labeling and electrophoresis of carbohydrates)

IT Fluorescent substances
(cyanine dyes; fluorescent labeling and electrophoresis of carbohydrates)

IT Amphoteric materials

IT Electrophoresis

IT Fluorescent indicators

IT Gel electrophoresis

IT Isoelectric focusing

IT Two-dimensional gel electrophoresis
(fluorescent labeling and electrophoresis of carbohydrates)

IT Oligosaccharides, analysis
(fluorescent labeling and electrophoresis of carbohydrates)

IT Carbohydrates, analysis
(fluorescent labeling and electrophoresis of carbohydrates)

IT Primary amines

IT Pyridinium compounds

IT Quaternary ammonium compounds, analysis

IT Secondary amines

IT Tertiary amines
(fluorescent labeling and electrophoresis of carbohydrates)

IT Cyanine dyes
(fluorescent; fluorescent labeling and electrophoresis of carbohydrates)

IT Onium compounds
(guanidinium; fluorescent labeling and electrophoresis of carbohydrates)

IT Functional groups
(imidazolyl; fluorescent labeling and electrophoresis of carbohydrates)

IT 205814-77-3 205814-78-4 205814-79-5 205814-80-8 205814-87-5
205814-88-6 205814-89-7 205814-90-0 205814-91-1 205815-03-8
205815-07-2
(fluorescent labeling and electrophoresis of carbohydrates)

IT 117-42-0, 8-Aminonaphthalene-1,3,6-trisulfonic acid
(fluorescent labeling and electrophoresis of carbohydrates)

IT 205814-82-0P 205814-84-2P 205814-94-4P 205814-98-8P 205815-00-5P
205815-02-7P 205815-06-1P
(fluorescent labeling and electrophoresis of carbohydrates)

IT 56-87-1, L-Lysine, analysis 28101-37-3
(fluorescent labeling and electrophoresis of carbohydrates)

IT 205815-15-2P 205815-18-5P
(fluorescent labeling and electrophoresis of carbohydrates)

IT 302-01-2, Hydrazine, analysis 39455-90-8, Pyrazolone
(fluorescent labeling and electrophoresis of carbohydrates)

IT 85-44-9, 1,3-Isobenzofurandione 100-22-1 109-55-7 110-95-2
622-15-1, N,N'-Diphenylformamidine 870-46-2, tert-Butyl carbazate
5460-29-7 14134-81-7 20205-29-2 57212-90-5 94790-37-1, Hbtu
146368-08-3 171429-43-9 198422-83-2 205814-83-1 205814-92-2
205814-97-7 205815-01-6
(fluorescent labeling and electrophoresis of carbohydrates)

IT 13474-65-2P 88015-58-1P 205814-76-2P 205814-81-9P 205814-85-3P
205814-96-6P 205815-04-9P 205815-05-0P 205815-09-4P
205815-10-7P 205815-13-0P 205815-14-1P 205815-17-4P

(fluorescent labeling and electrophoresis of carbohydrates)
IT 205814-86-4P 205815-11-8P
(fluorescent labeling and electrophoresis of carbohydrates)

L7 ANSWER 13 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:904559 CAPLUS
DOCUMENT NUMBER: 136:32660
TITLE: Charge-switch nucleotides for use in nucleic acid sequencing
INVENTOR(S): Williams, John G. K.; Bashford, Gregory R.; Chen, Jiyan; Draney, Dan; Narayanan, Nara; Reynolds, Bambi L.; Sheaff, Pamela
PATENT ASSIGNEE(S): Li-Cor, Inc., USA
SOURCE: PCT Int. Appl., 81 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001094609	A1	20011213	WO 2001-US18699	20010607
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002039738	A1	20020404	US 2001-876375	20010606
US 2002042071	A1	20020411	US 2001-876374	20010606
CA 2412567	AA	20011213	CA 2001-2412567	20010607
EP 1287154	A1	20030305	EP 2001-946213	20010607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004516810	T2	20040610	JP 2002-502149	20010607
US 2002168678	A1	20021114	US 2002-146400	20020514

PRIORITY APPLN. INFO.:

US 2000-209896P	P	20000607
US 2001-286238P	P	20010424
US 2001-876374	A	20010606
US 2001-876375	A	20010606
WO 2001-US18699	W	20010607

AB The present invention provides compds., methods and systems for sequencing nucleic acid using single mol. detection. Using labeled nucleoside triphosphates that exhibit charge-switching behavior, single-mol. DNA sequencing in a microchannel sorting system is realized. In operation, sequencing products are detected enabling real-time sequencing as successive detectable moieties flow through a detection channel. By elec. sorting charged mols., the cleaved product mols. are detected in isolation without interference from unincorporated nucleoside triphosphate derivs. and without illuminating the polymerase-DNA complex. Thus, a method for determining the charge on a charge-switch nucleotide of the invention is described. A charge-switch nucleotide comprising TTP conjugated via a doubly pos. charged linker to TAMRA was synthesized and used in a microchannel device in DNA sequencing.
IT Electric field
(charge-switch nucleotide cleavage products separation by; charge-switch

nucleotides for use in nucleic acid sequencing)
IT DNA sequence analysis
(charge-switch nucleotides for use in nucleic acid sequencing)
IT Nucleic acids
RL: ANT (Analyte); ANST (Analytical study)
(charge-switch nucleotides for use in nucleic acid sequencing)
IT Primers (nucleic acid)
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(charge-switch nucleotides for use in nucleic acid sequencing)
IT Cyanine dyes
Fluorescent substances
(conjugates with NTPs/dNTPs; charge-switch nucleotides for use in nucleic acid sequencing)
IT Deoxyribonucleoside triphosphates
Nucleoside triphosphates
Nucleotides, preparation
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(conjugates with fluorophores; charge-switch nucleotides for use in nucleic acid sequencing)
IT 9012-90-2, DNA polymerase 9013-05-2, Phosphatase 9014-24-8, DNA-dependent RNA polymerase 9025-82-5, Phosphodiesterase 9068-38-6, Reverse transcriptase 380304-23-4 380304-24-5 380304-25-6 380304-26-7 380304-27-8 380304-28-9 380304-29-0 380304-30-3 380304-31-4 380304-32-5 380304-33-6 380368-23-0
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(charge-switch nucleotides for use in nucleic acid sequencing)
IT 88-68-6DP, Anthranilamide, conjugates with NTPs/dNTPs 91-64-5DP, Coumarin, conjugates with NTPs/dNTPs 365-08-2DP, TTP, conjugates with fluorophores 1173-82-6DP, DUTP, conjugates with fluorophores 1927-31-7DP, DATP, conjugates with fluorophores 2056-98-6DP, DCTP, conjugates with fluorophores 2321-07-5DP, Fluorescein, conjugates with NTPs/dNTPs 2564-35-4DP, DGTP, conjugates with fluorophores 7440-27-9DP, Terbium, chelates, conjugates with NTPs/dNTPs 13558-31-1DP, conjugates with NTPs/dNTPs 17681-50-4DP, Reactive Red 4, conjugates with NTPs/dNTPs 50402-56-7DP, EDANS, conjugates with NTPs/dNTPs 76823-03-5DP, 5-Carboxyfluorescein, conjugates with NTPs/dNTPs 138026-71-8DP, BODIPY, conjugates with NTPs/dNTPs 204934-16-7DP, BODIPY TR, conjugates with NTPs/dNTPs
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(charge-switch nucleotides for use in nucleic acid sequencing)
IT 365-08-2, TTP 628-21-7, 1,4-Diiodobutane 926-63-6, N,N-Dimethylpropylamine 24424-99-5 380304-22-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(charge-switch nucleotides for use in nucleic acid sequencing)
IT 216659-47-1P 380304-19-8P **380304-20-1P** 380304-21-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(charge-switch nucleotides for use in nucleic acid sequencing)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 14 OF 22 USPATFULL on STN
ACCESSION NUMBER: 2001:163332 USPATFULL
TITLE: Analysis of carbohydrates
INVENTOR(S): Jackson, Peter, Fulbourne, United Kingdom
Cummins, William Jonathan, Herts, United Kingdom
West, Richard, Uxbridge, United Kingdom
Smith, John Anthony, Cardiff, United Kingdom

PATENT ASSIGNEE(S): Briggs, Mark Samuel Jonathan, Cardiff, United Kingdom
Amersham International PLC, Little Chalfont Bucks, United States (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6294667	B1	20010925	
	WO 9815829		19980416	
APPLICATION INFO.:	US 1999-284046		19990610	(9)
	WO 1997-GB2727		19971003	
			19990610	PCT 371 date
			19990610	PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	GB 1996-20881	19961007
	EP 1997-305550	19970728

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Allen, Marianne P.
ASSISTANT EXAMINER: Moran, Marjorie A
LEGAL REPRESENTATIVE: Marshall, O'Toole Gerstein, Murray & Borun
NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 11 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 1692
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention discloses a method of separating or distinguishing carbohydrate substances. More particularly the method includes using fluorescent labeling reagents which have a positive charge when bound to a carbohydrate, involves separating the labeled carbohydrate substances, such as by performing electrophoresis to cause differential migration of different labeled carbohydrate substances, or by isoelectric focusing in a pH gradient. The fluorescent labeling reagents are preferably cyanine dyes.

IT Functional groups
(aminoxy; fluorescent labeling and electrophoresis of carbohydrates)
IT Fluorescent substances
(cyanine dyes; fluorescent labeling and electrophoresis of carbohydrates)
IT Amphoteric materials
IT Electrophoresis
IT Fluorescent indicators
IT Gel electrophoresis
IT Isoelectric focusing
IT Two-dimensional gel electrophoresis
(fluorescent labeling and electrophoresis of carbohydrates)
IT Oligosaccharides, analysis
(fluorescent labeling and electrophoresis of carbohydrates)
IT Carbohydrates, analysis
(fluorescent labeling and electrophoresis of carbohydrates)
IT Primary amines
IT Pyridinium compounds
IT Quaternary ammonium compounds, analysis
IT Secondary amines
IT Tertiary amines
(fluorescent labeling and electrophoresis of carbohydrates)
IT Cyanine dyes
(fluorescent; fluorescent labeling and electrophoresis of carbohydrates)

IT Onium compounds
(guanidinium; fluorescent labeling and electrophoresis of carbohydrates)
IT Functional groups
(imidazolyl; fluorescent labeling and electrophoresis of carbohydrates)
IT 205814-77-3 205814-78-4 205814-79-5 205814-80-8 205814-87-5
205814-88-6 205814-89-7 205814-90-0 205814-91-1 205815-03-8
205815-07-2
(fluorescent labeling and electrophoresis of carbohydrates)
IT 117-42-0, 8-Aminonaphthalene-1,3,6-trisulfonic acid
(fluorescent labeling and electrophoresis of carbohydrates)
IT 205814-82-0P 205814-84-2P 205814-94-4P 205814-98-8P 205815-00-5P
205815-02-7P 205815-06-1P
(fluorescent labeling and electrophoresis of carbohydrates)
IT 56-87-1, L-Lysine, analysis 28101-37-3
(fluorescent labeling and electrophoresis of carbohydrates)
IT 205815-15-2P 205815-18-5P
(fluorescent labeling and electrophoresis of carbohydrates)
IT 302-01-2, Hydrazine, analysis 39455-90-8, Pyrazolone
(fluorescent labeling and electrophoresis of carbohydrates)
IT 85-44-9, 1,3-Isobenzofurandione 100-22-1 109-55-7 110-95-2
622-15-1, N,N'-Diphenylformamidine 870-46-2, tert-Butyl carbazate
5460-29-7 14134-81-7 20205-29-2 57212-90-5 94790-37-1, Hbtu
146368-08-3 171429-43-9 198422-83-2 205814-83-1 205814-92-2
205814-97-7 205815-01-6
(fluorescent labeling and electrophoresis of carbohydrates)
IT 13474-65-2P 88015-58-1P 205814-76-2P 205814-81-9P 205814-85-3P
205814-96-6P 205815-04-9P 205815-05-0P 205815-09-4P
205815-10-7P 205815-13-0P 205815-14-1P 205815-17-4P
(fluorescent labeling and electrophoresis of carbohydrates)
IT 205814-86-4P 205815-11-8P
(fluorescent labeling and electrophoresis of carbohydrates)

L7 ANSWER 15 OF 22 USPATFULL on STN

ACCESSION NUMBER:	2000:131438 USPATFULL
TITLE:	Process of making a compound by forming a polymer from a template drug
INVENTOR(S):	Wolff, Jon A., Madison, WI, United States Hagstrom, James E., Madison, WI, United States Budker, Vladimir G., Madison, WI, United States Trubetskoy, Vladimir S., Madison, WI, United States Slattum, Paul M., Madison, WI, United States Hanson, Lisa J., Madison, WI, United States
PATENT ASSIGNEE(S):	Mirus Corporation, Madison, WI, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6126964		20001003	
APPLICATION INFO.:	US 1997-778657		19970103	(8)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1996-9593P	19960104	(60)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Ketter, James
LEGAL REPRESENTATIVE:	Johnson, Mark K.
NUMBER OF CLAIMS:	11
EXEMPLARY CLAIM:	1

NUMBER OF DRAWINGS: 3 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 1410
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of forming polymers in the presence of nucleic acid using template polymerization. Also, a method of having the polymerization occur in heterophase systems. These methods can be used for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid binding polymers, for forming supramolecular complexes containing nucleic acid and polymer, and for forming an interpolyelectrolyte complex.

IT Histone H1
(copolymer with dimethyldithiobispropionimidate; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Anionic polyelectrolytes

IT Cationic polyelectrolytes

IT Drugs

IT Transformation (genetic)
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Histones

IT Peptides, biological studies

IT Polymers, biological studies

IT Protamines

IT Proteins (general), biological studies
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Nucleic acids
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Peptides, biological studies
(nuclear localization, copolymer with dithiobis[succinimidylpropionate]; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 9042-14-2, Dextran sulfate 54193-36-1, Polymethacrylic acid sodium salt
(caged DNA particles coated with; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 75-50-3, Trimethylamine, reactions 105-83-9, 3,3'-Diamino-N-methyldipropylamine 110-95-2 407-25-0, Trifluoroacetic anhydride 3030-47-5 5003-71-4, 3-Bromopropylamine hydrobromide 24424-99-5, Boc anhydride 58632-95-4, BOC-ON 174569-25-6 210292-17-4
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 814-68-6P, Acryloyl chloride 51834-66-3P 55362-80-6P, 9-Bromo-1-nonanol 109970-44-7P 136058-30-5P 210292-09-4P 210292-13-0P 210292-15-2P 210292-16-3P 210292-18-5P 210292-19-6P 210292-20-9P 210292-21-0P 210292-22-1P 210292-23-2P 210292-24-3P 210292-25-4P 210292-26-5P **210292-28-7P** 210292-30-1P
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 25104-18-1P, Polylysine 25232-42-2P, Polyvinylimidazole 38000-06-5P, Polylysine 141647-62-3DP, DPDPB, copolymer with T antigen peptide 210292-05-0P 210292-06-1P 210292-07-2P 210292-08-3P 210292-10-7P 210292-11-8P 210292-12-9P 210292-14-1P
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

L7 ANSWER 16 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:708870 CAPLUS

DOCUMENT NUMBER: 131:327545
TITLE: Polymer formation in the presence of nucleic acid using template polymerization
INVENTOR(S): Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.
PATENT ASSIGNEE(S): Mirus Corporation, USA
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9955825	A1	19991104	WO 1999-US8965	19990423
W: JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1073707	A1	20010207	EP 1999-920014	19990423
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, IE				

PRIORITY APPLN. INFO.: US 1998-70299 A 19980430
WO 1999-US8965 W 19990423

AB Polymers are formed in the presence of nucleic acid using template polymerization
Also, polymerization occurs in heterophase systems. These methods can be used for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid binding polymers, for forming supramol. complexes containing nucleic acid and polymer, and for forming an interpolyelectrolyte complex. Step polymerization with DNA as a template was performed using N,N'-bis(2-aminoethyl)-1,3-propanediamine and dithiobis(succinimidylpropionate). It was possible to obtain DNA-bound polyamide as a result of the polymerization and the resulting polymer can condense template DNA into compact structures.

IT DNA
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(complexes; polymer formation in the presence of nucleic acid using template polymerization)

IT Human adenovirus
Human herpesvirus
Parvovirus
Polyelectrolytes
Retroviridae
Sindbis virus
Transformation, genetic
(polymer formation in the presence of nucleic acid using template polymerization)

IT DNA
Polynucleotides
RNA
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(polymer formation in the presence of nucleic acid using template polymerization)

IT Polymerization
(template; polymer formation in the presence of nucleic acid using template polymerization)

IT 105-83-9 110-95-2, N,N,N',N'-Tetramethyl-1,3-propanediamine 814-68-6,

2-Propenoyl chloride 3030-47-5 4741-99-5, N,N'-Bis(2-aminoethyl)-1,3-propanediamine 5003-71-4, 3-Bromopropylamine hydrobromide 55362-80-6, 9-Bromo-1-nonanol 59012-54-3, Dimethyl 3,3'-dithiobispropionimidate 174569-25-6 210292-17-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(polymer formation in the presence of nucleic acid using template polymerization)

IT 51834-66-3P 109970-44-7P 136058-30-5P 205814-86-4P 210292-09-4P 210292-13-0P 210292-15-2P 210292-16-3P 210292-18-5P 210292-19-6P 210292-21-0P 210292-22-1P 210292-23-2P 210292-24-3P 210292-25-4P 210292-26-5P **210292-28-7P** 210292-30-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(polymer formation in the presence of nucleic acid using template polymerization)

IT 25104-18-1P, Poly(L-lysine) 38000-06-5P, Poly(L-lysine) 71550-12-4P, Polyallylamine hydrochloride 248915-96-0P
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polymer formation in the presence of nucleic acid using template polymerization)

IT 25232-42-2P, Poly(1-vinylimidazole) 57757-57-0DP, crosslinked with NLS peptide and DPDPB 141647-62-3DP, DPDPB, crosslinked with NLS peptide and DSP 210292-07-2P 248915-94-8P 248915-95-9P 248915-97-1P 248915-98-2P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polymer formation in the presence of nucleic acid using template polymerization)

IT 249299-75-0
RL: PRP (Properties)
(unclaimed sequence; polymer formation in the presence of nucleic acid using template polymerization)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 17 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:71546 CAPLUS
DOCUMENT NUMBER: 130:237731
TITLE: Sinulamide: an H,K-ATPase inhibitor from a soft coral Sinularia sp.
AUTHOR(S): Sata, Noriko U.; Sugano, Michihiro; Matsunaga, Shigeki; Fusetani, Nobuhiro
CORPORATE SOURCE: Laboratory of Aquatic Natural Products Chemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo, Tokyo, 113-8657, Japan
SOURCE: Tetrahedron Letters (1999), 40(4), 719-722
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Sinulamide (I·3Cl-), a new tetraprenylated spermine derivative, has been isolated from a soft coral Sinularia sp. as an H,K-ATPase inhibitor. The structure was assigned on the basis of spectroscopic data and confirmed by a total synthesis.

IT Antitumor agents
Configuration
Cytotoxicity
Molecular structure, natural product

New natural products
Sinularia
(isolation, structure and synthesis of sinulamide: an H,K-ATPase inhibitor from a soft coral Sinularia sp.)

IT Antitumor agents
(leukemia; isolation, structure and synthesis of sinulamide: an H,K-ATPase inhibitor from a soft coral Sinularia sp.)

IT Alkaloids, preparation
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); SPN (Synthetic preparation); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(terpenoid; isolation, structure and synthesis of sinulamide: an H,K-ATPase inhibitor from a soft coral Sinularia sp.)

IT 9000-83-3, ATPase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(H,K-; isolation, structure and synthesis of sinulamide: an H,K-ATPase inhibitor from a soft coral Sinularia sp.)

IT 221278-53-1P, Sinulamide hydrochloride
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); SPN (Synthetic preparation); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(isolation, structure and synthesis of sinulamide, an H,K-ATPase inhibitor from a soft coral Sinularia sp.)

IT 107-13-1, 2-Propenenitrile, reactions 110-60-1, Putrescin 24034-73-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(isolation, structure and synthesis of sinulamide: an H,K-ATPase inhibitor from a soft coral Sinularia sp.)

IT 14209-32-6P 32480-11-8P, Geranylgeranial 35750-48-2P, Geranylgeranoic acid 57784-25-5P, Geranylnerol 57784-38-0P, Geranylneral 89471-07-8P, Geranylneroic acid 103493-12-5P 177213-61-5P 194808-59-8P 221226-22-8P **221226-23-9P**, N2,N2,N3,N3-Tetramethylspermine dichloride 221226-24-0P 221226-25-1P, p-Nitrophenyl geranylneroate 221226-26-2P 221226-27-3P 221234-74-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(isolation, structure and synthesis of sinulamide: an H,K-ATPase inhibitor from a soft coral Sinularia sp.)

IT 221278-52-0P, (all-E)-Sinulamide hydrochloride
RL: SPN (Synthetic preparation); PREP (Preparation)
(isolation, structure and synthesis of sinulamide: an H,K-ATPase inhibitor from a soft coral Sinularia sp.)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 18 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:485169 CAPLUS
DOCUMENT NUMBER: 129:118754
TITLE: Method for making a compound for delivery to cells by forming a polymer in the presence of a template drug, especially nucleic acid
INVENTOR(S): Wolff, Jon A.; Hagstrom, James E.; Budker, Vladimir G.; Trubetskoy, Vladimer S.; Slattum, Paul M.; Hanson, Lisa J.
PATENT ASSIGNEE(S): Mirus Corp., USA
SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 9829541	A1	19980709	WO 1997-US24089		19971230
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE					
US 6126964	A	20001003	US 1997-778657		19970103
EP 958356	A1	19991124	EP 1997-954803		19971230
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, IE					
US 2002061287	A1	20020523	US 2001-4763		20011205
US 2002085989	A1	20020704	US 2001-5294		20011205
US 2004161463	A1	20040819	US 2004-755785		20040112
PRIORITY APPLN. INFO.:			US 1997-778657	A	19970103
			US 1996-9593P	P	19960104
			WO 1997-US24089	W	19971230
			US 1999-464871	A3	19991216
			US 2001-993216	A3	20011116

OTHER SOURCE(S): MARPAT 129:118754

AB A method of making a compound for delivery to a cell comprising forming a polymer in the presence of a biol. active drug is disclosed.. A method of forming polymers in the presence of nucleic acid using template polymerization and of having the polymerization occur in heterophase systems is further disclosed. These methods can be used for the delivery of nucleic acids, for condensing the nucleic acid, for forming nucleic acid-binding polymers, for forming supramol. complexes containing nucleic acid and polymer, and for forming an interpolyelectrolyte complex. The nuclear localizing peptide of SV40 T antigen was copolymd. with dithiobis[succinimidylpropion ate] in the presence of plasmid DNA and this process enabled the formation of complexes that expressed luciferase after transfection into 3T3 cells in culture.

IT Histones
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(H1, copolymer with dimethyldithiobispropionimidate; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Polyelectrolytes
(anionic; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Polyelectrolytes
(cationic; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Drugs
Transformation, genetic
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Histones
Peptides, biological studies
Polymers, biological studies
Protamines
Proteins, general, biological studies
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT Nucleic acids
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(method for making compound for delivery to cells by forming polymer in

presence of template drug, especially nucleic acid)

IT Peptides, biological studies
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nuclear localization, copolymer with dithiobis[succinimidylpropionate]; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 9042-14-2, Dextran sulfate 54193-36-1, Polymethacrylic acid sodium salt
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(caged DNA particles coated with; method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 75-50-3, Trimethylamine, reactions 105-83-9, 3,3'-Diamino-N-methyldipropylamine 110-95-2 407-25-0, Trifluoroacetic anhydride 3030-47-5 5003-71-4, 3-Bromopropylamine hydrobromide 24424-99-5, Boc anhydride 58632-95-4, BOC-ON 174569-25-6 210292-17-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 814-68-6P, Acryloyl chloride 51834-66-3P 55362-80-6P, 9-Bromo-1-nonanol 109970-44-7P 136058-30-5P 210292-09-4P 210292-13-0P 210292-15-2P 210292-16-3P 210292-18-5P 210292-19-6P 210292-20-9P 210292-21-0P 210292-22-1P 210292-23-2P 210292-24-3P 210292-25-4P 210292-26-5P **210292-28-7P** 210292-30-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

IT 25104-18-1P, Polylysine 25232-42-2P, Polyvinylimidazole 38000-06-5P, Polylysine 141647-62-3DP, DPDPB, copolymer with T antigen peptide 210292-05-0P 210292-06-1P 210292-07-2P 210292-08-3P 210292-10-7P 210292-11-8P 210292-12-9P 210292-14-1P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(method for making compound for delivery to cells by forming polymer in presence of template drug, especially nucleic acid)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 19 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:239358 CAPLUS
DOCUMENT NUMBER: 128:280585
TITLE: Fluorescent labeling and electrophoresis of carbohydrates
INVENTOR(S): Jackson, Peter; Cummins, William Jonathan; West, Richard; Smith, John Anthony; Briggs, Mark Samuel Jonathan
PATENT ASSIGNEE(S): Amersham International PLC, UK; Jackson, Peter; Cummins, William Jonathan; West, Richard; Smith, John Anthony; Briggs, Mark Samuel Jonathan
SOURCE: PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9815829	A1	19980416	WO 1997-GB2727	19971003

W: AU, CA, HU, IL, JP, KR, US
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

CA 2267337	AA	19980416	CA 1997-2267337		19971003
AU 9745656	A1	19980505	AU 1997-45656		19971003
EP 938675	A1	19990901	EP 1997-944011		19971003
EP 938675	B1	20030507			
R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE					
JP 2001501735	T2	20010206	JP 1998-517295		19971003
US 6294667	B1	20010925	US 1999-284046		19990610
PRIORITY APPLN. INFO.:			GB 1996-20881	A	19961007
			EP 1997-305550	A	19970728
			WO 1997-GB2727	W	19971003

AB The subject of the invention is the labeling and separation of fluorescently labeled carbohydrate substances, by virtue of their different charge-to-mass ratios or other factors, so as to enable a much larger number of different fluorescently labeled carbohydrate substances to be separated from each other electrophoretically than has been possible previously and thereby to facilitate their structural determination and their identification. Preferably the method for separating or distinguishing carbohydrate substances comprises labeling carbohydrate substances with a fluorescent labeling reagent comprising a naphthalene ring structure or other suitable fluorescent structure, having as a substituent a reactive group capable of reacting with a reducing sugar to bind thereto, also having at least one substituent, that may also be the reactive group, capable of carrying at least one pos. charge which may exist on the fluorescently labeled carbohydrate substances and does not extinguish the fluorescence of the labeling reagent. The anal. is continued by applying the labeled substances to an electrophoretic gel, or other matrix used to support electrophoretic sepns., and running the electrophoresis to cause differential migration of different substances. Preferably the fluorescent labeling reagent is a cyanine dye.

IT Functional groups
(aminoxy; fluorescent labeling and electrophoresis of carbohydrates)

IT Fluorescent dyes
Fluorescent dyes
(cyanine; fluorescent labeling and electrophoresis of carbohydrates)

IT Amphoteric materials
Electrophoresis
Fluorescent indicators
Gel electrophoresis
Isoelectric focusing
(fluorescent labeling and electrophoresis of carbohydrates)

IT Oligosaccharides, analysis
RL: ANT (Analyte); BSU (Biological study, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent)
(fluorescent labeling and electrophoresis of carbohydrates)

IT Carbohydrates, analysis
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent)
(fluorescent labeling and electrophoresis of carbohydrates)

IT Pyridinium compounds
Quaternary ammonium compounds, analysis
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(fluorescent labeling and electrophoresis of carbohydrates)

IT Cyanine dyes
Cyanine dyes
(fluorescent; fluorescent labeling and electrophoresis of

carbohydrates)

IT Onium compounds
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(guanidinium; fluorescent labeling and electrophoresis of carbohydrates)

IT Functional groups
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(imidazolyl; fluorescent labeling and electrophoresis of carbohydrates)

IT Amines, analysis
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(primary; fluorescent labeling and electrophoresis of carbohydrates)

IT Amines, analysis
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(secondary; fluorescent labeling and electrophoresis of carbohydrates)

IT Amines, analysis
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(tertiary; fluorescent labeling and electrophoresis of carbohydrates)

IT Gel electrophoresis
(two-dimensional; fluorescent labeling and electrophoresis of carbohydrates)

IT 205814-77-3 205814-78-4 205814-79-5 205814-80-8 205814-87-5 205814-88-6 205814-89-7 205814-90-0 205814-91-1 205815-03-8 205815-07-2
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fluorescent labeling and electrophoresis of carbohydrates)

IT 117-42-0, 8-Aminonaphthalene-1,3,6-trisulfonic acid
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BUU (Biological use, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(fluorescent labeling and electrophoresis of carbohydrates)

IT 205814-82-0P 205814-84-2P 205814-94-4P 205814-98-8P 205815-00-5P 205815-02-7P 205815-06-1P
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified); BUU (Biological use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(fluorescent labeling and electrophoresis of carbohydrates)

IT 56-87-1, L-Lysine, analysis 28101-37-3
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); NUU (Other use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fluorescent labeling and electrophoresis of carbohydrates)

IT 205815-15-2P 205815-18-5P
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); NUU (Other use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(fluorescent labeling and electrophoresis of carbohydrates)

IT 302-01-2, Hydrazine, analysis 39455-90-8, Pyrazolone
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(fluorescent labeling and electrophoresis of carbohydrates)
IT 85-44-9, 1,3-Isobenzofurandione 100-22-1 109-55-7 110-95-2
622-15-1, N,N'-Diphenylformamidine 870-46-2, tert-Butyl carbazate
5460-29-7 14134-81-7 20205-29-2 57212-90-5 94790-37-1, Hbtu
146368-08-3 171429-43-9 198422-83-2 205814-83-1 205814-92-2
205814-97-7 205815-01-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorescent labeling and electrophoresis of carbohydrates)
IT 13474-65-2P 88015-58-1P 205814-76-2P 205814-81-9P 205814-85-3P
205814-96-6P 205815-04-9P 205815-05-0P 205815-09-4P
205815-10-7P 205815-13-0P 205815-14-1P 205815-17-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(fluorescent labeling and electrophoresis of carbohydrates)
IT 205814-86-4P 205815-11-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(fluorescent labeling and electrophoresis of carbohydrates)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 20 OF 22 USPATFULL on STN
ACCESSION NUMBER: 86:6447 USPATFULL
TITLE: Aminopropylaminobleomycin derivatives and process for preparation thereof
INVENTOR(S): Umezawa, Hamao, Tokyo, Japan
Fujii, Akio, Kanagawa, Japan
Muraoka, Yasuhiko, Saitama, Japan
Nakatani, Tokuji, Saitama, Japan
Fukuoka, Takeyo, Saitama, Japan
Takahashi, Katsutoshi, Tokyo, Japan
PATENT ASSIGNEE(S): Zaidan Hojin Biseibutsu Kagaku Kenkyu Kai, Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4568490		19860204
APPLICATION INFO.:	US 1985-743738		19850612 (6)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1984-635096, filed on 27 Jul 1984, now patented, Pat. No. US 4537880 which is a continuation-in-part of Ser. No. US 1982-453254, filed on 27 Dec 1982, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1981-210449	19811229

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Phillips, Delbert R.
LEGAL REPRESENTATIVE: Carnahan, Robert E.
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
LINE COUNT: 1308
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An aminopropylaminobleomycin represented by the following formula or a salt thereof, which is minimized in side effects such as pulmonary toxicity:

[BX]--NH--(CH.sub.2).sub.3 --A--)CH.sub.2).sub.3 --B

wherein

[BX] represents the acyl group of bleomycinic acid whose formula differs from that of bleomycin acid by the removal of the hydroxyl group from the carboxyl group of said acid;

A represents a group of the general formula ##STR1## wherein R.sub.1 is a lower alkyl or benzyl,

R.sub.2 is a lower alkyl or benzyl,

R is a lower alkylene, and

n is 0 or 1; and

B represents a group of the formula ##STR2## wherein (i) R.sub.3 is hydrogen and R.sub.4 is

(a) benzyl substituted by one or more halogen atoms, provided that the benzyl is substituted by two halogen atoms when R.sub.1 is lower alkyl,

(b) benzyl substituted by cyano, two or more alkoxy groups or two or more benzyloxy groups,

(c) lower alkyl substituted by cycloalkyl or anthranyl,

(d) phenylethyl substituted by one or more halogen atoms, or

(e) diphenylethyl; or

(ii) both R.sub.3 and R.sub.4 are benzyl which may be substituted by one or more

(a) benzyloxy groups,

(b) ring substituted benzyloxy groups in which the ring substituents may be one or more halogen atoms, lower alkoxy groups or benzyloxy groups, or

(c) cycloalkylmethoxy groups;

and a process for the preparation thereof.

IT Bactericides, Disinfectants, and Antiseptics
IT Neoplasm inhibitors
(aminopropylaminobleomycins)
IT 88080-74-4
(amidation of)
IT 109-55-7
(benzoylation of)
IT 123-08-0 139-85-5
(benzylation of)
IT 88015-04-7P 88015-05-8P 88015-06-9P 88015-07-0P 88015-08-1P
88015-09-2P 88015-10-5P 88015-11-6P 88015-12-7P 88015-13-8P
88015-14-9P 88015-15-0P 88015-62-7P 88015-63-8P 88015-64-9P
88033-61-8P 88033-62-9P 88033-63-0P 88033-64-1P 88033-65-2P
88033-66-3P 88033-67-4P 88033-68-5P 88033-69-6P 88033-70-9P
88033-71-0P 88033-72-1P 88033-73-2P 88033-74-3P 88033-75-4P

88033-76-5P 88033-77-6P 88033-78-7P 88033-79-8P 88033-80-1P
88033-81-2P 88033-82-3P 88033-83-4P 88033-84-5P 88033-85-6P
88033-86-7P 88033-87-8P 88033-88-9P 88033-89-0P 88033-90-3P
88033-91-4P 88056-61-5P 88056-62-6P 88056-63-7P 88056-64-8P
88082-27-3P 88082-28-4P 88082-29-5P 88082-30-8P 88083-11-8P
88266-67-5P
(preparation and bactericidal and antitumor activity of)

IT 88003-37-6P 88003-38-7P 88003-39-8P 88003-40-1P 88003-41-2P
88003-42-3P 88003-43-4P 88003-44-5P 88003-45-6P 88003-46-7P
88003-47-8P 88003-48-9P 88003-49-0P 88003-50-3P 88003-51-4P
88003-52-5P 88003-53-6P 88003-54-7P 88003-55-8P 88003-56-9P
88003-57-0P 88003-58-1P 88003-59-2P 88003-60-5P 88003-61-6P
88003-62-7P 88003-63-8P 88003-64-9P 88003-65-0P 88003-66-1P
88003-67-2P 88003-68-3P 88003-69-4P 88003-70-7P 88003-71-8P
88003-72-9P 88003-73-0P 88003-74-1P 88003-75-2P 88003-76-3P
88003-77-4P 88003-78-5P 88003-79-6P 88003-80-9P 88003-81-0P
88003-82-1P 88018-88-6P 88018-89-7P 88018-90-0P 88018-92-2P
88018-93-3P 88018-94-4P 88018-95-5P 88018-96-6P 88036-97-9P
88266-65-3P
(preparation and chromatog. and electrophoresis of)

IT 88015-58-1P
(preparation and hydrolysis of)

IT 88015-61-6P
(preparation and oxidation of)

IT 88015-55-8P 88015-56-9P 88015-57-0P **88015-59-2P**
88015-60-5P
(preparation and reaction of, with bleomycin acid)

IT 40948-30-9P
(preparation and reaction of, with bromopropylphthalamide)

IT 88015-44-5P 88015-45-6P 88015-52-5P 88015-53-6P 88015-54-7P
88081-27-0P 88082-57-9P 88154-84-1P
(preparation of)

IT 5460-29-7
(reaction of, with benzamidopropyldimethylamine)

IT 103-67-3 110-95-2
(reaction of, with bromopropylphthalamide)

IT 74-95-3
(reaction of, with cyclotridecanone)

IT 832-10-0
(reaction of, with dibromomethane)

IT 622-95-7 2746-25-0 18880-04-1
(reaction of, with dihydroxybenzaldehyde)

IT 836-42-0 3814-33-3
(reaction of, with hydroxybenzaldehyde)

IT 88003-35-4 88003-36-5 88015-51-4 88018-91-1
(reductive alkylation of)

IT 66-77-3 89-98-5 98-01-1, reactions 98-03-3 98-86-2, reactions
99-91-2 102-04-5 104-53-0 104-88-1, reactions 105-07-7 122-78-1
123-11-5, reactions 454-89-7 459-57-4 587-04-2 613-45-6
642-31-9 653-37-2 872-53-7 874-42-0 947-91-1 1122-91-4
2043-61-0 4251-65-4 4277-29-6 4373-07-3 5447-02-9 5453-80-5
5664-21-1 6137-86-6 6287-38-3 6688-11-5 88015-46-7 88015-47-8
88015-48-9 88015-49-0 88015-50-3 88036-81-1
(reductive alkylation of aminopropylaminopropylaminobleomycin by)

IT 88003-83-2
(reductive alkylation of, with aldehyde)

L7 ANSWER 21 OF 22 USPATFULL on STN
ACCESSION NUMBER: 85:50750 USPATFULL
TITLE: Aminopropylaminobleomycin derivatives and process for

preparation thereof

INVENTOR(S): Umezawa, Hamao, Tokyo, Japan
Fujii, Akio, Kanagawa, Japan
Muraoka, Yasuhiko, Saitama, Japan
Nakatani, Tokuji, Saitama, Japan
Fukuoka, Takeyo, Saitama, Japan
Takahashi, Katsutoshi, Tokyo, Japan
PATENT ASSIGNEE(S): Zaidan Hojin Biseibutsu Kagaku Kenkyu Kai, Tokyo, Japan
(non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4537880		19850827
APPLICATION INFO.:	US 1984-635096		19840727 (6)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1982-453254, filed on 27 Dec 1982, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1981-210449	19811229

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Phillips, Delbert R.
LEGAL REPRESENTATIVE: Carnahan, Robert E.
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
LINE COUNT: 1306
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An aminopropylaminobleomycin represented by the following formula or a salt thereof, which is minimized in side effects such as pulmonary toxicity:

[BX]--NH--(CH.sub.2).sub.3 --A--(CH.sub.2).sub.3 --B

wherein

[BX] represents the acyl group of bleomycinic acid whose formula differs from that of bleomycin acid by the removal of the hydroxyl group from the carboxyl group of said acid;

A represents a group of the general formula ##STR1## wherein R.sub.1 is a lower alkyl or benzyl,

R.sub.2 is a lower alkyl or benzyl,

R is a lower alkylene, and

n is 0 or 1; and

B represents a group of the formula ##STR2## wherein (i) R.sub.3 is hydrogen and R.sub.4 is

(a) benzyl substituted by one or more halogen atoms, provided that the benzyl is substituted by two halogen atoms when R.sub.1 is lower alkyl,

(b) benzyl substituted by cyano, two or more alkoxy groups or two or more benzyloxy groups,

(c) lower alkyl substituted by cycloalkyl or anthranyl,

(d) phenylethyl substituted by one or more halogen atoms, or

(e) diphenylethyl; or

(ii) both R.sub.3 and R.sub.4 are benzyl which may be substituted by one or more

(a) benzyloxy groups,

(b) ring substituted benzyloxy groups in which the ring substituents may be one or more halogen atoms, lower alkoxy groups or benzyloxy groups, or

(c) cycloalkylmethoxy groups;

and a process for the preparation thereof.

IT Bactericides, Disinfectants, and Antiseptics
IT Neoplasm inhibitors
(aminopropylaminobleomycins)
IT 88080-74-4
(amidation of)
IT 109-55-7
(benzoylation of)
IT 123-08-0 139-85-5
(benzylation of)
IT 88015-04-7P 88015-05-8P 88015-06-9P 88015-07-0P 88015-08-1P
88015-09-2P 88015-10-5P 88015-11-6P 88015-12-7P 88015-13-8P
88015-14-9P 88015-15-0P 88015-62-7P 88015-63-8P 88015-64-9P
88033-61-8P 88033-62-9P 88033-63-0P 88033-64-1P 88033-65-2P
88033-66-3P 88033-67-4P 88033-68-5P 88033-69-6P 88033-70-9P
88033-71-0P 88033-72-1P 88033-73-2P 88033-74-3P 88033-75-4P
88033-76-5P 88033-77-6P 88033-78-7P 88033-79-8P 88033-80-1P
88033-81-2P 88033-82-3P 88033-83-4P 88033-84-5P 88033-85-6P
88033-86-7P 88033-87-8P 88033-88-9P 88033-89-0P 88033-90-3P
88033-91-4P 88056-61-5P 88056-62-6P 88056-63-7P 88056-64-8P
88082-27-3P 88082-28-4P 88082-29-5P 88082-30-8P 88083-11-8P
88266-67-5P
(preparation and bactericidal and antitumor activity of)
IT 88003-37-6P 88003-38-7P 88003-39-8P 88003-40-1P 88003-41-2P
88003-42-3P 88003-43-4P 88003-44-5P 88003-45-6P 88003-46-7P
88003-47-8P 88003-48-9P 88003-49-0P 88003-50-3P 88003-51-4P
88003-52-5P 88003-53-6P 88003-54-7P 88003-55-8P 88003-56-9P
88003-57-0P 88003-58-1P 88003-59-2P 88003-60-5P 88003-61-6P
88003-62-7P 88003-63-8P 88003-64-9P 88003-65-0P 88003-66-1P
88003-67-2P 88003-68-3P 88003-69-4P 88003-70-7P 88003-71-8P
88003-72-9P 88003-73-0P 88003-74-1P 88003-75-2P 88003-76-3P
88003-77-4P 88003-78-5P 88003-79-6P 88003-80-9P 88003-81-0P
88003-82-1P 88018-88-6P 88018-89-7P 88018-90-0P 88018-92-2P
88018-93-3P 88018-94-4P 88018-95-5P 88018-96-6P 88036-97-9P
88266-65-3P
(preparation and chromatog. and electrophoresis of)
IT 88015-58-1P
(preparation and hydrolysis of)
IT 88015-61-6P
(preparation and oxidation of)
IT 88015-55-8P 88015-56-9P 88015-57-0P **88015-59-2P**
88015-60-5P
(preparation and reaction of, with bleomycin acid)
IT 40948-30-9P
(preparation and reaction of, with bromopropylphthalamide)

IT 88015-44-5P 88015-45-6P 88015-52-5P 88015-53-6P 88015-54-7P
88081-27-0P 88082-57-9P 88154-84-1P
(preparation of)
IT 5460-29-7
(reaction of, with benzamidopropyldimethylamine)
IT 103-67-3 110-95-2
(reaction of, with bromopropylphthalamide)
IT 74-95-3
(reaction of, with cyclotridecanone)
IT 832-10-0
(reaction of, with dibromomethane)
IT 622-95-7 2746-25-0 18880-04-1
(reaction of, with dihydroxybenzaldehyde)
IT 836-42-0 3814-33-3
(reaction of, with hydroxybenzaldehyde)
IT 88003-35-4 88003-36-5 88015-51-4 88018-91-1
(reductive alkylation of)
IT 66-77-3 89-98-5 98-01-1, reactions 98-03-3 98-86-2, reactions
99-91-2 102-04-5 104-53-0 104-88-1, reactions 105-07-7 122-78-1
123-11-5, reactions 454-89-7 459-57-4 587-04-2 613-45-6
642-31-9 653-37-2 872-53-7 874-42-0 947-91-1 1122-91-4
2043-61-0 4251-65-4 4277-29-6 4373-07-3 5447-02-9 5453-80-5
5664-21-1 6137-86-6 6287-38-3 6688-11-5 88015-46-7 88015-47-8
88015-48-9 88015-49-0 88015-50-3 88036-81-1
(reductive alkylation of aminopropylaminopropylaminobleomycin by)
IT 88003-83-2
(reductive alkylation of, with aldehyde)

L7 ANSWER 22 OF 22 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1984:23013 CAPLUS
DOCUMENT NUMBER: 100:23013
TITLE: Aminopropylaminobleomycin derivatives
INVENTOR(S): Umezawa, Hamao; Fujii, Akio; Muraoka, Yasuhiko; Nakatani, Tokuji; Fukuoka, Takeyo; Takahashi, Katsutoshi
PATENT ASSIGNEE(S): Microbiochemical Research Foundation, Japan
SOURCE: Ger. Offen., 76 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3247199	A1	19830707	DE 1982-3247199	19821221
JP 58116497	A2	19830711	JP 1981-210449	19811229
JP 63006078	B4	19880208		
CA 1244824	A1	19881115	CA 1982-417731	19821215
NL 8204857	A	19830718	NL 1982-4857	19821216
CH 657859	A	19860930	CH 1982-7478	19821222
GB 2112781	A1	19830727	GB 1982-36626	19821223
GB 2112781	B2	19851218		
SE 8207408	A	19830630	SE 1982-7408	19821227
SE 465034	B	19910715		
SE 465034	C	19911107		
ES 518580	A1	19840201	ES 1982-518580	19821227
AT 8204693	A	19850815	AT 1982-4693	19821227
AT 380021	B	19860325		
DK 8205764	A	19830630	DK 1982-5764	19821228

HU 27462	O	19831028	HU 1982-4179	19821228
HU 187836	B	19860228		
CS 237334	B2	19850716	CS 1982-9910	19821228
IL 67581	A1	19860331	IL 1982-67581	19821228
FR 2519638	A1	19830718	FR 1982-22035	19821229
FR 2519638	B1	19851129		
US 4537880	A	19850827	US 1984-635096	19840727
US 4568490	A	19860204	US 1985-743738	19850612
PRIORITY APPLN. INFO.:			JP 1981-210449	19811229
			US 1982-453254	19821227
			US 1984-635096	19840727

AB Bleomycins I (X = amino, piperazino, aminoalkylamino; NRR1 = amino) (53 compds.) and their Cu chelates were prepared Thus, I (X = NMe, R = R1 = H) was reductively alkylated with cycloundecanecarboxaldehyde to give I Cu chelate (X = NMe, R = cycloundecylmethyl, R1 = H) which was converted to its Cu-free form (II). II caused 50% inhibition of He-La cell growth at 0.58 μg/mL and caused no pulmonary fibrosis in mice at 10 + 5 mg/kg.

IT Bactericides, Disinfectants, and Antiseptics
Neoplasm inhibitors
(aminopropylaminobleomycins)

IT 88080-74-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(amidation of)

IT 109-55-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(benzoylation of)

IT 123-08-0 139-85-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(benzylation of)

IT 88015-04-7P 88015-05-8P 88015-06-9P 88015-07-0P 88015-08-1P
88015-09-2P 88015-10-5P 88015-11-6P 88015-12-7P 88015-13-8P
88015-14-9P 88015-15-0P 88015-62-7P 88015-63-8P 88015-64-9P
88033-61-8P 88033-62-9P 88033-63-0P 88033-64-1P 88033-65-2P
88033-66-3P 88033-67-4P 88033-68-5P 88033-69-6P 88033-70-9P
88033-71-0P 88033-72-1P 88033-73-2P 88033-74-3P 88033-75-4P
88033-76-5P 88033-77-6P 88033-78-7P 88033-79-8P 88033-80-1P
88033-81-2P 88033-82-3P 88033-83-4P 88033-84-5P 88033-85-6P
88033-86-7P 88033-87-8P 88033-88-9P 88033-89-0P 88033-90-3P
88033-91-4P 88056-61-5P 88056-62-6P 88056-63-7P 88056-64-8P
88082-27-3P 88082-28-4P 88082-29-5P 88082-30-8P 88083-11-8P
88266-67-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and bactericidal and antitumor activity of)

IT 88003-37-6P 88003-38-7P 88003-39-8P 88003-40-1P 88003-41-2P
88003-42-3P 88003-43-4P 88003-44-5P 88003-45-6P 88003-46-7P
88003-47-8P 88003-48-9P 88003-49-0P 88003-50-3P 88003-51-4P
88003-52-5P 88003-53-6P 88003-54-7P 88003-55-8P 88003-56-9P
88003-57-0P 88003-58-1P 88003-59-2P 88003-60-5P 88003-61-6P
88003-62-7P 88003-63-8P 88003-64-9P 88003-65-0P 88003-66-1P
88003-67-2P 88003-68-3P 88003-69-4P 88003-70-7P 88003-71-8P
88003-72-9P 88003-73-0P 88003-74-1P 88003-75-2P 88003-76-3P
88003-77-4P 88003-78-5P 88003-79-6P 88003-80-9P 88003-81-0P
88003-82-1P 88018-88-6P 88018-89-7P 88018-90-0P 88018-92-2P
88018-93-3P 88018-94-4P 88018-95-5P 88018-96-6P 88036-97-9P
88266-65-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and chromatog. and electrophoresis of)

IT 88015-58-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and hydrolysis of)
IT 88015-61-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and oxidation of)
IT 88015-55-8P 88015-56-9P 88015-57-0P **88015-59-2P**
88015-60-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with bleomycin acid)
IT 40948-30-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with bromopropylphthalamide)
IT 88015-44-5P 88015-45-6P 88015-52-5P 88015-53-6P 88015-54-7P
88081-27-0P 88082-57-9P 88154-84-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 5460-29-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzamidopropyldimethylamine)
IT 103-67-3 110-95-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with bromopropylphthalamide)
IT 74-95-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with cyclotridecanone)
IT 832-10-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dibromomethane)
IT 622-95-7 2746-25-0 18880-04-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dihydroxybenzaldehyde)
IT 836-42-0 3814-33-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydroxybenzaldehyde)
IT 88003-35-4 88003-36-5 88015-51-4 88018-91-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reductive alkylation of)
IT 66-77-3 89-98-5 98-01-1, reactions 98-03-3 98-86-2, reactions
99-91-2 102-04-5 104-53-0 104-88-1, reactions 105-07-7 122-78-1
123-11-5, reactions 454-89-7 459-57-4 587-04-2 613-45-6 642-31-9
653-37-2 872-53-7 874-42-0 947-91-1 1122-91-4 2043-61-0
4251-65-4 4277-29-6 4373-07-3 5447-02-9 5453-80-5 5664-21-1
6137-86-6 6287-38-3 6688-11-5 88015-46-7 88015-47-8 88015-48-9
88015-49-0 88015-50-3 88036-81-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reductive alkylation of aminopropylaminopropylaminobleomycin by)
IT 88003-83-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reductive alkylation of, with aldehyde)

=> => fil reg
FILE 'REGISTRY' ENTERED AT 14:21:00 ON 02 DEC 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 1 DEC 2004 HIGHEST RN 791553-15-6
DICTIONARY FILE UPDATES: 1 DEC 2004 HIGHEST RN 791553-15-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

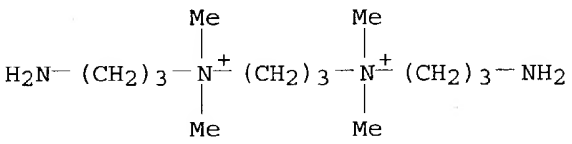
Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

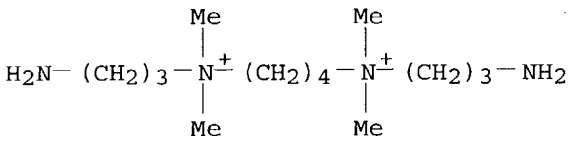
Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d ide can l4 1-8

L4 ANSWER 1 OF 8 REGISTRY COPYRIGHT 2004 ACS on STN
RN 780021-10-5 REGISTRY
CN 1,3-Propanediaminium, N,N'-bis(3-aminopropyl)-N,N,N',N'-tetramethyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H34 N4
CI COM
SR CA

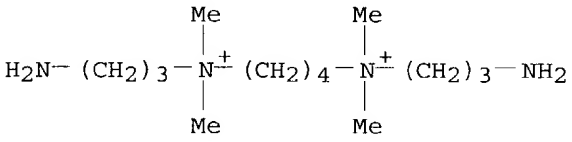


L4 ANSWER 2 OF 8 REGISTRY COPYRIGHT 2004 ACS on STN
RN 721393-11-9 REGISTRY
CN 1,4-Butanediaminium, N,N'-bis(3-aminopropyl)-N,N,N',N'-tetramethyl- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C14 H36 N4
CI COM
SR CA



L4 ANSWER 3 OF 8 REGISTRY COPYRIGHT 2004 ACS on STN
RN 380304-20-1 REGISTRY

CN 1,4-Butanediaminium, N,N'-bis(3-aminopropyl)-N,N,N',N'-tetramethyl-, diiodide, dihydrochloride (9CI) (CA INDEX NAME)
MF C14 H36 N4 . 2 Cl H . 2 I
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent)
CRN (721393-11-9)



●2 HCl

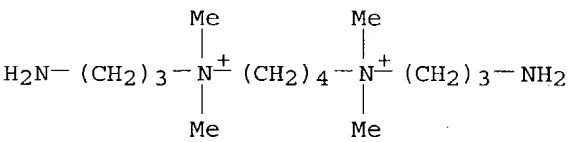
●2 I⁻

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:288636

REFERENCE 2: 136:32660

L4 ANSWER 4 OF 8 REGISTRY COPYRIGHT 2004 ACS on STN
RN 221226-23-9 REGISTRY
CN 1,4-Butanediaminium, N,N'-bis(3-aminopropyl)-N,N,N',N'-tetramethyl-, dichloride (9CI) (CA INDEX NAME)
OTHER NAMES:
CN N2,N2,N3,N3-Tetramethylspermine dichloride
MF C14 H36 N4 . 2 Cl
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)
CRN (721393-11-9)



●2 Cl⁻

1 REFERENCES IN FILE CA (1907 TO DATE)

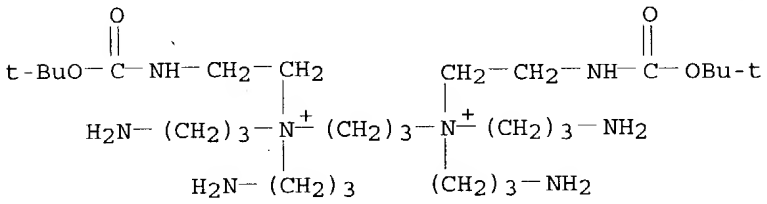
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 130:237731

L4 ANSWER 5 OF 8 REGISTRY COPYRIGHT 2004 ACS on STN
RN 210292-28-7 REGISTRY
CN 1,3-Propanediaminium, N,N,N',N'-tetrakis(3-aminopropyl)-N,N'-bis[2-[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]-, salt with trifluoroacetic acid (1:2) (9CI) (CA INDEX NAME)
MF C29 H66 N8 O4 . 2 C2 F3 O2
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

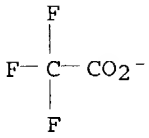
CM 1

CRN 210292-27-6
CMF C29 H66 N8 O4



CM 2

CRN 14477-72-6
CMF C2 F3 O2



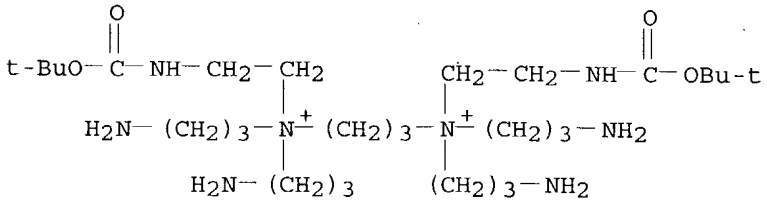
3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:107515

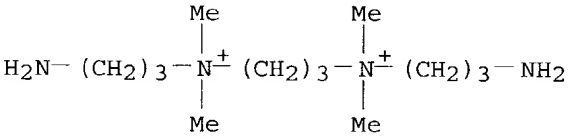
REFERENCE 2: 131:327545

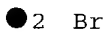
REFERENCE 3: 129:118754

L4 ANSWER 6 OF 8 REGISTRY COPYRIGHT 2004 ACS on STN
RN 210292-27-6 REGISTRY
CN 1,3-Propanediaminium, N,N,N',N'-tetrakis(3-aminopropyl)-N,N'-bis[2-[[(1,1-dimethylethoxy)carbonyl]amino]ethyl]- (9CI) (CA INDEX NAME)
MF C29 H66 N8 O4
CI COM
SR CA



L4 ANSWER 7 OF 8 REGISTRY COPYRIGHT 2004 ACS on STN
RN 205814-96-6 REGISTRY
CN 1,3-Propanediaminium, N,N'-bis(3-aminopropyl)-N,N,N',N'-tetramethyl-, dibromide (9CI) (CA INDEX NAME)
MF C13 H34 N4 . 2 Br
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)
CRN (780021-10-5)

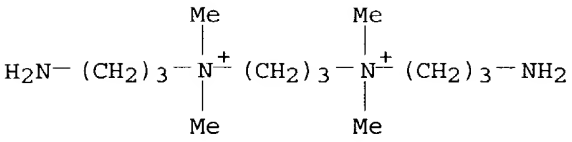




1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 128:280585

L4 ANSWER 8 OF 8 REGISTRY COPYRIGHT 2004 ACS on STN
RN 88015-59-2 REGISTRY
CN 1,3-Propanediaminium, N,N'-bis(3-aminopropyl)-N,N,N',N'-tetramethyl-, dichloride, dihydrochloride (9CI) (CA INDEX NAME)
MF C13 H34 N4 . 2 Cl H . 2 Cl
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)
CRN (780021-10-5)



● 2 Cl^-

● 2 HCl

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 100:23013

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